



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,105	12/28/2000	Dan Eylon	6599P003X4	8847

8791 7590 01/14/2005

BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD
SEVENTH FLOOR
LOS ANGELES, CA 90025-1030

EXAMINER

PATEL, HARESH N

ART UNIT	PAPER NUMBER
----------	--------------

2154

DATE MAILED: 01/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/751,105

Applicant(s)

EYLON ET AL.

Examiner

Haresh Patel

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-52 are presented for examination.

Response to Arguments

2. Applicant's arguments filed 8/12/2004 with respect to claims 1-52 have been considered but are moot in view of the new ground(s) of rejection.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-52 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 - 24 of U.S. Patent No. 6,311,221.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the patent teaches all the limitations as disclosed such that the interpretation of the streaming a software application is similar to "transmitting a software application comprising a collection of executably interrelated modules from a

Art Unit: 2154

first computer system storing the application to a second computer providing an execution environment for executing the application”, of the U.S. Patent 6,311,221. The additional limitations are well known in the art. For example, Duso et al. 5,892,915, discloses use of second computer being a client computer (col., 33, lines 23 – 45), concept of using library to store streamlets (figure 2, col., 7, lines 16 - 40), usage of streaming manager and file-structure (col., 8, lines 18 - 50), use of differential prediction model (e.g., col., 21, lines 4 - 30). Chen et. al. 6,412,004, discloses the concept of installation of streaming environment software on the client by remote software (e.g., col. 5, line 4 – col. 6, line 10). Stumm 5,768,528, discloses maintaining and utilizing data map for routing streamlets and providing feedback to the prediction model to adjust streaming streamlets, col. 1 line 12 – col. 2, line 45). Duso’s teachings would help a second computer being a client computer, to utilize streaming manager provided stream blocks, from the library having file-structure with media information. The server would be able to send predictive media information base on the client’s need. Chen’s teachings would help install software on the client remotely, so that the client will have the software to handle the subsequent information, that would be provided to the client as needed. Stumm’s teachings would help maintain and utilize data map for routing stream blocks and adjusting the stream blocks sequencing based on the client usage of the media information.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2154

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-9, 11, 12, 19-28, 30, 31, 38-43, 45, 46, are rejected under 35 U.S.C.

103(a) as being unpatentable over Duso et al. 5,892,915 (Hereinafter Duso-EMC-Corporation) in view of "Official Notice".

6. As per claims 1, 19, 22, 38, 39, Duso-EMC-Corporation clearly teaches a system / a method / a computer program product, for streaming a software application to a client (e.g., col., 33, lines 23 – 45, use of stream server and client over the network, figure 2) comprising:

an application library having application files (e.g., use of tape SILO and tape library, figure 2, col., 7, lines 16 - 40) a streaming manager configured to send the application files to a client as a plurality of streamlets (e.g., software module to send application files to clients by blocks of data / video clips, col., 8, lines 18 - 50), each streamlet corresponding to a particular data block in a respective application file (e.g., play position of the clip, figures 25-27, col., 33, col., 33, lines 8 -44),

a prediction model (e.g., concept of sending prefetch data, col., 18, lines 17 – 67) and a streaming prediction engine (e.g., use of a software module to prefetch data for streaming, figure 28) configured to identify at least one streamlet which is predicted to be most appropriate to send to a given client at a particular time in accordance with the prediction model (e.g., selecting block of data for prefetching to send to the client based upon need, col., 18, lines 17 – 67), dividing the application files into streamlets prior to initiation of a streaming session, (e.g., selecting block of data of the application files before sending to the client, col., 18, lines 17 – 67).

Duso-EMC-Corporation do not specifically mention about having the prediction model stored within the application library.

“Official Notice” is taken that both the concept and advantages of providing the prediction model stored within the application library is well known and expected in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the prediction model stored within the application library with the teachings of Duso-EMC-Corporation in order to facilitate the application library to retain the prediction model. The motivation would be obvious because the prediction model is implemented using a software module. The software module needs to be stored in a place to be retained for future use. It is well known in the art of using an application library to store the software modules including prediction model software. The prediction model would be stored in the application library for future use for predicting the data blocks to be sent to the client.

7. As per claims 2, 3, 20, 21, Duso-EMC-Corporation teaches the claimed limitations rejected under claims 1 and 19. Duso-EMC-Corporation also teaches that the streamlet size can be specified (e.g., figure 25, col., 32, lines 31 – 60) and different techniques can be implemented considering the stream’s playback rate in relation to the storage size (e.g., col., 15, lines 43 – 63). However, Duso-EMC-Corporation do not specifically mention about each streamlet corresponds to a file data block having a size equal to a code page size used during file reads by an operating system expected to be present on a client system and the data block size being four kilobytes.

“Official Notice” is taken that both the concept and advantages of providing each streamlet corresponds to a file data block having a size equal to a code page size used during file reads by an operating system expected to be present on a client system and the data block size being four kilobytes is well known and expected in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include each streamlet corresponds to a file data block having a size equal to a code page size used during file reads by an operating system expected to be present on a client system and the data block size being four kilobytes with the teachings of Duso-EMC-Corporation in order to facilitate an operating system at the client system to receive file streams having data block size equal to a code page size of four kilobytes. The motivation would be obvious because the operating system at the client system would process the received data considering the page size for processing the received data. The file streams having four kilobytes size would be easier to handle by the operating system for processing. For example, Miller et al., 5,237,460, discloses the advantages of having the size of the data blocks selected to be efficient value depending upon the way the data is handled in the system, including the block size being selected to be a submultiple of the page size, which is typically 2K-bytes or 4K-bytes in the most commonly-used operating systems, col., 2, lines 26 – 59. The operating system at the client would avoid changing the size of the received file streams and would process the received file streams faster.

8. As per claims 4, 23, 40, 47, Duso-EMC-Corporation teaches the following:

the application files are stored in the application library as preprocessed streamlets (e.g., col., 21, lines 31 - 64), each streamlet corresponding to a data block in a particular application file at a particular offset and having a predefined length (e.g., figures 25 - 27, col., 27, lines 25 - 47),

upon receipt at the server of a request for a particular streamlet from the client, retrieve the requested streamlet from the application library and transmit the streamlet to the client (col., 18, lines 17 - 67).

9. As per claims 5, 6, 24, 25, Duso-EMC-Corporation teaches the claimed limitations rejected under claims 1, 4 and 19, 23. Duso-EMC-Corporation also teaches data being compressed (e.g., col., 11, lines 2-48). However, Duso-EMC-Corporation do not specifically mention about a code page size used during files reads by an operating system expected to be present to a client system.

“Official Notice” is taken that both the concept and advantages of providing a code page size used during files reads by an operating system expected to be present to a client system is well known and expected in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a code page size used during files reads by an operating system expected to be present to a client system with the teachings of Duso-EMC-Corporation in order to facilitate an operating system at the client system to receive file streams having data block size equal to a code page size for processing. The motivation would be obvious because the operating system at the client system would process the received data considering the page size for processing the received data. The file streams

Art Unit: 2154

having predetermined size would be easier to handle by the operating system for processing. For example, Miller et al., 5,237,460, discloses the advantages of having the size of the data blocks selected to be efficient value depending upon the way the data is handled in the system, including the block size being selected to be a submultiple of the page size, which is typically 2K-bytes or 4K-bytes in the most commonly-used operating systems, col., 2, lines 26 – 59. The operating system at the client would process the received file streams faster with the known predefined data block size.

10. As per claims 7, 26, 41, Duso-EMC-Corporation teaches the following:

the streaming manager is configured to send the client upon a first initiation of the streaming application, a file structure specification of the application files (e.g., figures 25 – 27, col., 27, lines 25 – 47).

11. As per claims 8, 9, 27, 28, 42, 43, Duso-EMC-Corporation teaches the claimed limitations rejected under claims 1, 7, 19, 26, 38, 41. Duso-EMC-Corporation also teaches the application library has a startup block comprising the file structure specification and set of streamlets stored therein (e.g., figures 25 – 27, col., 27, lines 25 – 47). However, Duso-EMC-Corporation do not specifically mention about a set of streamlets comprising at least those streamlets containing the portions of the application required to enable execution of the application to be initiated.

“Official Notice” is taken that both the concept and advantages of providing a set of streamlets comprising at least those streamlets containing the portions of the

Art Unit: 2154

application required to enable execution of the application to be initiated is well known and expected in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a set of streamlets comprising at least those streamlets containing the portions of the application required to enable execution of the application to be initiated with the teachings of Duso-EMC-Corporation in order to facilitate the client system to receive data streams of the application and to start the execution of the application. The motivation would be obvious because the client system would process the received data considering that the received data would be used for starting the execution of the application. As per the information received by the client system by the stream blocks, the client would start the execution using the stream blocks of the application. The stream blocks being for the execution of the application would help the client system to execute the application after the stream blocks are received.

12. As per claims 11-12, 30-31, 45-46, Duso-EMC-Corporation teaches the claimed limitations rejected under claims 1, 19, 38. Duso-EMC-Corporation also teaches a differential prediction model associated with the client and the prediction engine configured to make streamlet predictions for the client in accordance with the default prediction model and the respective differential prediction model (e.g., col., 21, lines 4 - 30).

However, Duso-EMC-Corporation do not specifically mention about upon receipt of application usage tracking information from the client and to update at least one of the differential prediction model for the client and the prediction model.

“Official Notice” is taken that both the concept and advantages of upon receipt of application usage tracking information from the client and to update at least one of the differential prediction model for the client and the prediction model is well known and expected in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include upon receipt of application usage tracking information from the client and to update at least one of the differential prediction model for the client and the prediction model with the teachings of Duso-EMC-Corporation in order to facilitate the client system to receive provide environment support software data streams before the application data streams are used for initiation and to modify the prefetch/predict information as per the application data streams usage. The motivation would be obvious because the client system would first need data streams of the installing streaming environment support software. Then, the client system would need the application data streams for execution. Using the installing streaming environment support software, the client system would execute the data streams received for the application to be executed. The client system would provide the application usage status feedback to the block streams sending software to inform the prediction model for prefetch/predict next information needed by the client.

13. Claims 10, 29 and 44, are rejected under 35 U.S.C. 103(a) as being unpatentable over Duso and “Official Notice” and in view of Chen et. al. 6,412,004 (Hereinafter Chen).

Art Unit: 2154

14. As per claims 10, 29 and 44, Duso-EMC-Corporation teaches the claimed limitations rejected under claims 1, 19, 38. However, Duso-EMC-Corporation do not teach installation of streaming environment support software.

Chen teaches the following:

the streaming manager is further configured to install streaming environment support software on the client prior to initiating an application streaming processes (e.g., The metaserver can manage both live and on-demand video streams. If a client computer wishes to watch a live event or an on-demand content, it should be prepared to wait until the event actually starts or until the tape with the requested multimedia content is installed into the multimedia server, col. 5, line 4 – col. 6, line 10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Duso-EMC-Corporation with the teachings of Chen in order to facilitate streaming environment for the streaming application at the client device before the application is executed. The motivation would be obvious because the client system would be able to utilize the server sent streaming environment instantly whenever it is necessary, including executing the application block streams.

15. Claims 13-18, 32-37, 47-52, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bittinger in view of Duso and "Official Notice" and in further view of Stumm 5,768,528.

Art Unit: 2154

16. As per claims 13-18, 32-37, 47-52, Duso-EMC-Corporation teaches the claimed limitations rejected under claims 1, 19, 38. However, Duso-EMC-Corporation do not teach usage of data map.

Stumm teaches the following.

an application status repository comprising a data map for each active client and the data map generally indicating the streamlets which are present at the respective client (e.g., The database server maintains a schedule of events file adapted to contain information relating to predetermined downloading schedules to the subscribers of the database server. The schedule of events file or the relevant portions of it are then transmitted to individual subscribers so that requests for information can be launched from the subscribers terminals at a predetermined time in accordance with the schedule of event file, abstract, receiving from each subscriber an information request in accordance with the schedule of events file and a list of existing files in the subscriber's database including the file names, file sizes and corresponding file identification code, col. 1 line 12 – col. 2, line 45),

determine if the data map indicates that the client already has the requested streamlet and request an updated data map from the client and replace the data map with a returned updated map (e.g., figure 11, col. 1 line 12 – col. 2, line 45);

retrieve the requested streamlet from the application library and update the data map upon a successful transmission of the requested streamlet to the client (e.g., figure 11, col., 2, lines 41 – 66),

replace the data map in the application status repository for the client with the data map received from the client and compare the data map in the application status

Art Unit: 2154

repository for the client with the data map received from the client and log mismatches (e.g., figure 11, col. 8 lines 5 – 48).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Duso-EMC-Corporation with the teachings of Stumm to keep track of previously server sent data at the client. The use of data map would help client application of what the data has already present at the client, which no longer is necessary to be requested from the server. By using the same data at the client, which was downloaded previously, it would save time and network bandwidth during downloading of data at the client.

Conclusion

Guck, 5,911,776, Unisys Corporation, also teaches streaming of multimedia data using block of streams for predictive advertisement video/audio clips.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Haresh Patel whose telephone number is (571) 272-3973. The examiner can normally be reached on Monday, Tuesday, Thursday and Friday from 10:00 am to 8:00 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2154

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Haresh Patel

December 24, 2004


JOHN FOLLANSBEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100